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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,478	10/16/2003	Christopher Patrick	020026	7962
23696	7590	09/14/2005	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			TSAI, CAROL S W	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/687,478

Applicant(s)

PATRICK ET AL.

Examiner

Carol S. Tsai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 8/1/05.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12, 15-24, 26, 33 and 38-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15, 16 and 39-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Election/Restrictions***

2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-7, 11, 12, 15, 16, 39-45, and 49-55 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Publication 2004/0043726 to Rowitch.

The applied reference has a common assignee/inventors with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35

U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

With respect to claims 1 and 55, Rowitch discloses a method of estimating a parameter of a local maxima or minima of a function comprising: performing interpolation on samples of the function at or near a local maxima or minima, resulting in an interpolated local maxima or minima (see paragraph 0008); deriving an interpolation offset comprising a deviation between locations of the interpolated local maxima or minima and a sampled local maxima or minima (see paragraph 0052); and deriving an estimate of the parameter from the interpolation offset (see paragraph 0083).

As to claims 39 and 54, Rowitch discloses a memory tangibly embodying a sequence of software instructions for performing a method of estimating a parameter of a local maxima or minima of a function (see paragraph 0071) comprising: performing interpolation on samples of the function at or near a local maxima or minima, resulting in an interpolated local maxima or minima (see paragraph 0008); deriving an interpolation offset comprising a deviation between locations of the interpolated local maxima or minima and a sampled local maxima or minima (see paragraph 0052); and deriving an estimate of the parameter from the interpolation offset (see paragraph 0083).

As to claims 2, 3, 40, and 41, Rowitch also discloses the function being a correlation function (see paragraphs 0017, 0023, 0027, and 0041).

As to claims 4, 11, 12, 42, 49, and 50, Rowitch discloses the interpolation offset being determined by using a pre-existing relationship that is present between these two variables (see paragraph 0072).

As to claims 5-7 and 43-45, Rowitch also discloses a deviation between locations of interpolated and sampled peaks along a code phase dimension (see paragraph 0079).

As to claims 15, 16, and 53, Rowitch also discloses the claimed invention, except for directly deriving an estimate of the parameter from the interpolation offset through an access to the lookup table (see paragraph 0054).

As to claims 51 and 52, Rowitch also discloses the parameter bias being a peak energy bias (see paragraph 0048).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8-10 and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rowitch in view of U. S. Publication 2004/0176099 to Sahai et al.

As noted above, with respect to claims 8-10 and 46-48, Rowitch discloses the claimed invention, except for a deviation between locations of interpolated and sampled peaks along a Doppler frequency dimension

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Sahai et al. also teach a deviation between locations of interpolated and sampled peaks along a Doppler frequency dimension (see paragraphs 0030 and 0054).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Rowitch's method to include a deviation between locations of interpolated and sampled peaks along a Doppler frequency dimension, as taught by Sahai et al., in order that correlation can be performed.

#### *Response to Arguments*

7. Applicant's arguments with respect to claims 1-12, 15, 16, and 39-55 have been considered but are moot in view of the new ground(s) of rejection.

#### *Contact Information*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. W. Tsai whose telephone number is (571) 272-2224. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571) 272-2216. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR


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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

cswt  
September 09, 2005

  
Carol S. W. Tsai  
Primary Examiner  
Art Unit 2857